

Selective Bi-directional Fish Passage

How can we improve connectivity to benefit desired species while preventing unacceptable risks from detrimental species?

GOAL: Facilitate up- and downstream movement of desirable fishes and removal of invasive fishes in the Boardman River

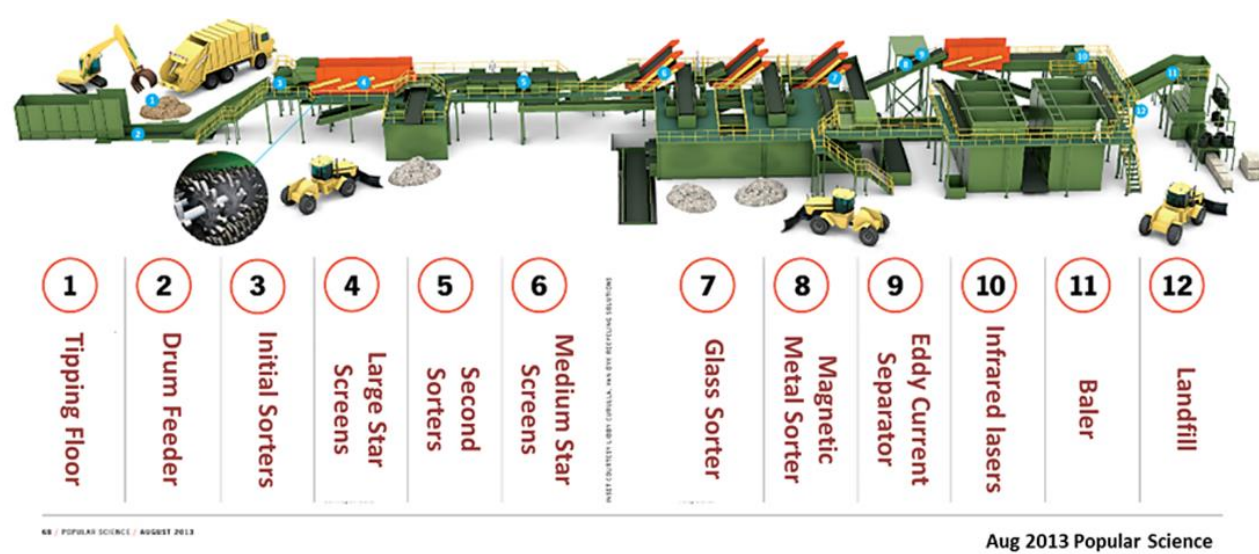
The Union Street Dam will be replaced by a facility to allow scientists to test technologies and techniques aimed at optimizing selective fish passage and invasive species control. Once optimized (~10 y), the system will become a permanent fish passageway. **Public consultation and community input gained from the MIDNR Open House will guide the decision, identify “desirable” species, and prioritize needs for fish passage on the Boardman River.**



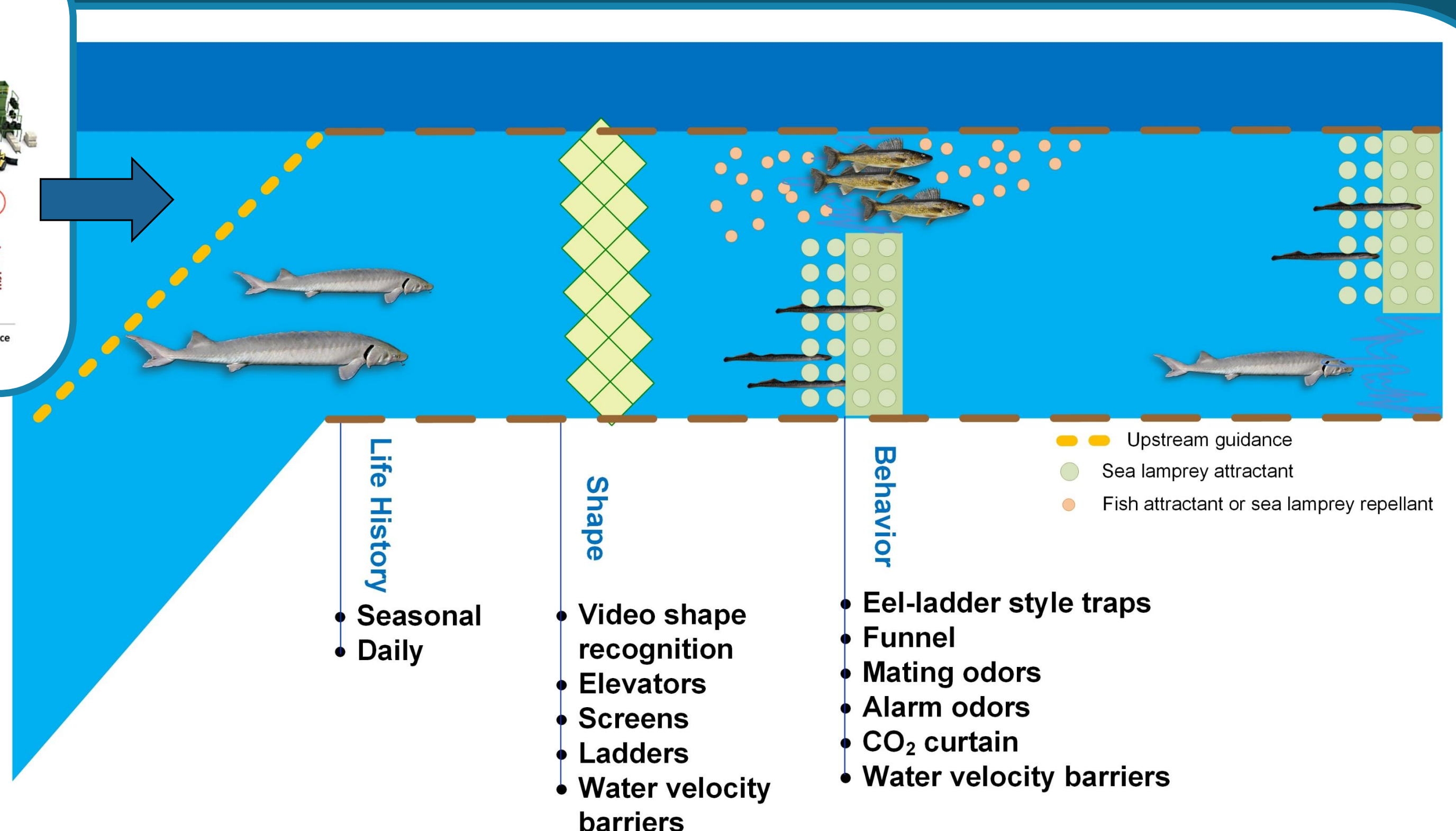
How to sort an assortment of fishes?

Sorting fish is in some ways like sorting recyclables. With recent innovations, hand-sorting recyclables is no longer needed—machines do the sorting for us based on material characteristics like size and shape. Likewise for fish, we hope to “sort” desirable from invasive fishes based on their traits and behaviors. We will use technologies that manipulate behavior of fishes in addition to recent hydraulic engineering advances to develop innovative solutions for passing desirable fishes and controlling or removing invasive species.

Single-stream recycling



Integrating technologies to sort fish



Why the Boardman River?

The **Boardman River** was selected among 12 candidate rivers for the project because:

- Union Street dam currently blocks invasive fishes and the existing structure is not sufficient to pass most desirable fishes;
- If Union Street dam is removed, the invasive sea lamprey will gain access to 179 miles of high-quality spawning habitat;
- A parasitic sea lamprey consumes ~40lbs of fish; therefore, the Boardman River must not become a lamprey-producer;
- Strong management desire to restore connectivity while controlling invasive species (**NOTE: a solution to this problem does not currently exist**);
- A solution for Union Street dam is the last piece of the Boardman River Restoration Project!

What are the expected results?

- Enhanced fisheries on the Boardman River
- Educational opportunities for locals and tourists
- Lessons learned will be applied at new sites
- Regional, national, and global implications of results

Who is involved?

Led by the Great Lakes Fishery Commission in collaboration with the Boardman River Implementation Team, a team of biologists, engineers, and local managers are participating in a series of workshops to design the testing facility, establish a program of research, assess project success, and oversee long-term project management.



Traverse City and Public - Local agencies and educators are working to increase community engagement and make the FISHPASS facility a tourist destination and educational center in addition to a regional research center.



Great Lakes Fishery Commission

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